



# Grain Transportation Report

A weekly publication of the  
Transportation and Marketing Programs/Transportation Services Branch  
[www.ams.usda.gov/tmdtsb/grain](http://www.ams.usda.gov/tmdtsb/grain)

Mar. 30, 2006

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**Total Transportation Cost Increases for U.S.-Japan Corn and Soybeans.** The total cost of shipping corn and soybeans from Minneapolis to Japan increased nearly 19 percent during the 4<sup>th</sup> quarter. The cost of transporting grain to Japan through the Gulf by truck, rail, barge, and ocean vessel increased between 13 and 27 percent, by individual mode, during the quarter. Although the farm value for both commodities decreased during the quarter, the decrease was offset by the more substantial increase in the total transportation cost for Gulf shipments of corn. Total landed cost, when shipped through the Gulf, increased by 6 percent for corn and decreased by 1 percent for soybeans. The total landed cost combines total transportation cost and farm value.

The total transportation cost for corn shipments through the Pacific Northwest (PNW) remained relatively unchanged. The total soybean shipment cost increased by 5 percent. Total landed costs through the PNW decreased by 4 percent for corn and 5 percent for soybeans.

Table 1 -- Quarterly modal transportation cost comparison for corn from Minneapolis to Japan

	Gulf			PNW		
	3rd Qtr '05	4th Qtr '05	Percent Change	3rd Qtr '05	4th Qtr '05	Percent Change
	-\$/metric ton -		%	-\$/metric ton		%
Truck	8.90	10.06	13.03	8.90	10.06	13.03
Barge	28.88	36.71	27.11			
Rail-Corn				40.12	36.67	-8.60
Ocean	38.38	43.69	13.84	22.39	24.82	10.85
Total Transportation	76.16	90.46	18.78	71.40	71.55	0.21
Farm Value	72.17	66.13	-8.37	72.17	66.13	-8.37
Total Landed Cost	148.32	156.59	5.58	143.57	137.68	-4.10
Transportation % of Landed Cost	51.35	57.77		49.73	51.97	

Table 2 -- Quarterly modal transportation cost comparison for soybeans from Minneapolis to Japan

	Gulf			PNW		
	3rd Qtr '05	4th Qtr '05	Percent Change	3rd Qtr '05	4th Qtr '05	Percent Change
	-\$/metric ton-		%	-\$/metric ton-		%
Truck	8.90	10.06	13.03	8.90	10.06	13.03
Barge	28.88	36.71	27.11			
Rail-soybeans				39.79	39.79	0.00
Ocean	38.38	43.69	13.84	22.39	24.82	10.85
Total Transportation	76.16	90.46	18.78	71.08	74.67	5.05
Farm Value	224.26	207.11	-7.65	224.26	207.11	-7.65
Total Landed Cost	300.42	297.57	-0.95	295.34	281.78	-4.59
Transportation % of Landed Cost	25.35	30.40		24.07	26.50	

Barge rates to the Gulf increased by 27 percent during the fourth quarter. The usual 4<sup>th</sup> quarter rate increases caused by the harvest and its increased demand for covered barges were exacerbated this year by the effects of Hurricanes Katrina and Rita during the 3<sup>rd</sup> quarter. These weather-related circumstances led to barge repositioning

problems in the northern loading areas, slowed barge turnaround times, and caused labor shortages in the Gulf. Along with several other factors, this resulted in barge inefficiencies (*see GTR, Feb. 23, 2006*) and record high covered barge rates. Barge rates remained higher than normal through the beginning of 2006.

Ocean freight rates for Gulf-to-Japan grain shipments rebounded by nearly 14 percent, regaining almost half the 30 percent drop that occurred in the 3<sup>rd</sup> quarter, 2005. Fourth quarter rates, however, remained 29 percent lower than 4<sup>th</sup> quarter 2004. Ocean rates through the PNW to Japan increased by nearly 11 percent in the 4<sup>th</sup> quarter 2005, but still remained 40 percent below the same period in 2004. The 4<sup>th</sup> quarter increase may be attributed to an increase in break-bulk shipments and increased mineral demand in China (*see GTR, Feb. 16, 2006*). In addition, Panamax activity is returning to normal in the Gulf.

Truck rates for both corn and soybeans originating in the North Central region increased by 13 percent during the 4<sup>th</sup> quarter. This 4<sup>th</sup> quarter increase was partly due to decreased truck availability and higher diesel fuel costs, as was the increase in the 3<sup>rd</sup> quarter. [Karl.Hacker@usda.gov](mailto:Karl.Hacker@usda.gov)

# Grain Transportation Indicators

**Table 1--Grain transport cost indicators\***

Week ending	Truck	Rail**	Barge	Gulf	Ocean
03/29/06	172	-33	179	162	191
<b>Compared with last week</b>	↓	↓	↓	↑	↓

\*Indicator: Base year 2000 = 100; Weekly updates include truck = diesel (\$/gallon); rail = nearby secondary rail market (\$/car); barge = spot Illinois River basis (index = percent of tariff rate); and ocean = routes to Japan (\$/metric ton)

\*\*The rail indicator is not an index. It is the difference between the nearby secondary rail market bid for this week and the average bid for year 2000 (+) 100.

Source: Transportation & Marketing Programs/AMS/USDA

**Table 2--Market update: U.S. origins to export position price spreads (\$/bushel)**

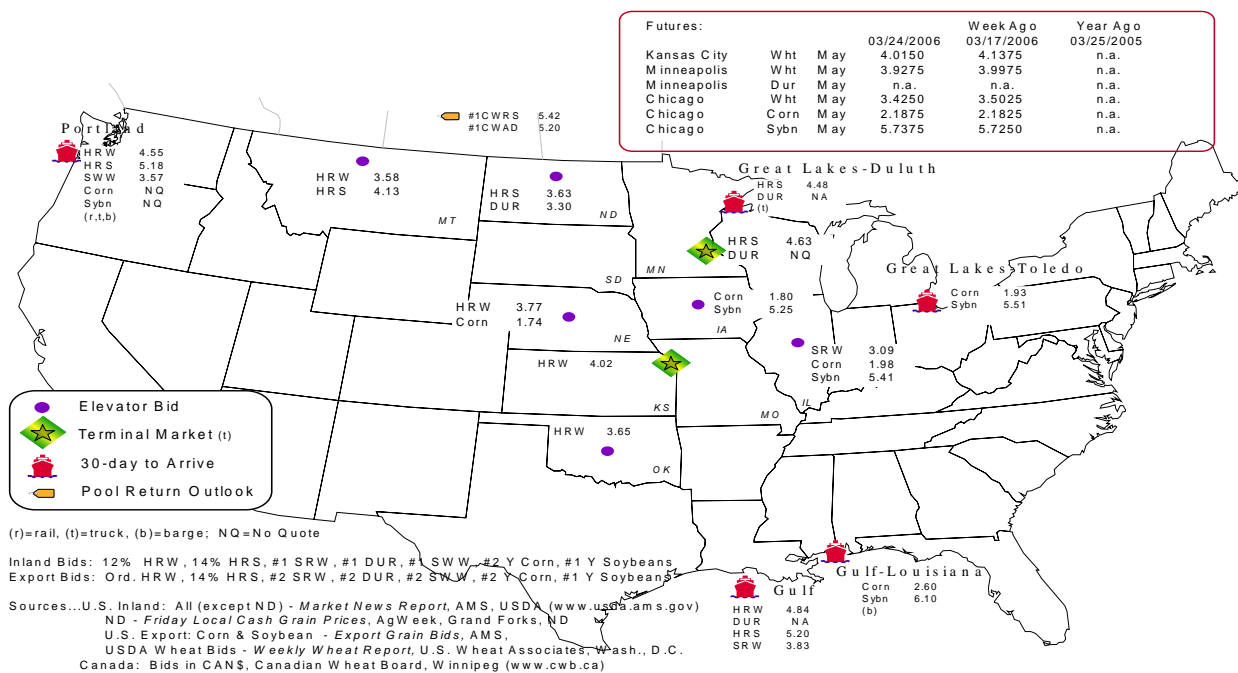
Commodity	Origin--destination	3/24/2006	3/17/2006
Corn	IL--Gulf	-0.62	-0.63
Corn	NE--Gulf	-0.86	-0.84
Soybean	IA--Gulf	-0.85	-0.85
HRW	KS--Gulf	-0.82	-0.88
HRS	ND--Portland	-1.55	-1.48

Note: nq = no quote

Source: Transportation & Marketing Programs/AMS/USDA

The **grain bid summary** illustrates the market relationships for commodities. Positive and negative adjustments in differential between terminal and futures markets, and the relationship to inland market points, are indicators of changes in fundamental market supply and demand. The map may be used to monitor market and time differentials.

Figure 1  
**Grain bid summary**



# Rail Transportation

**Table 3--Rail deliveries to port (carloads)\***

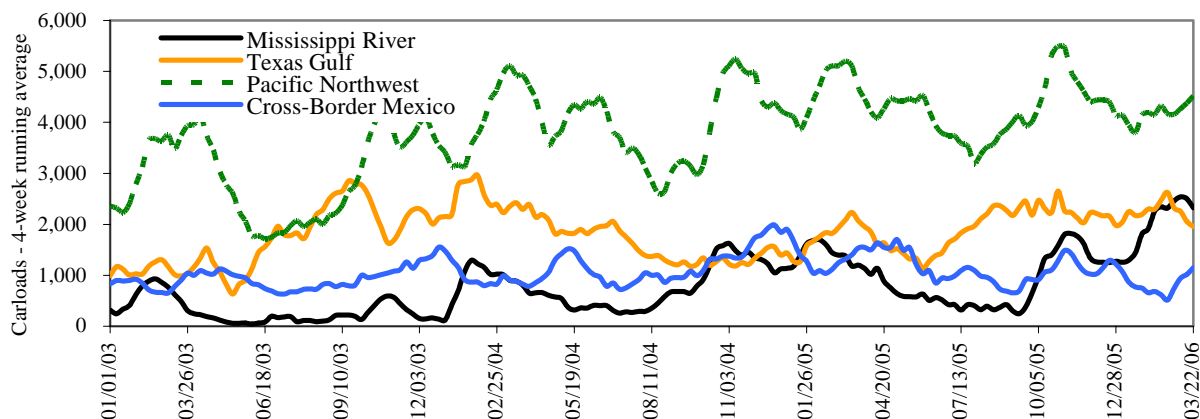
Week ending	Mississippi Gulf***	Texas Gulf	Cross-Border Mexico****	Pacific Northwest	Atlantic & East Gulf	Total
3/22/2006 <sup>p</sup>	1,806	2,106	1,163	4,461	594	10,130
3/15/2006 <sup>r</sup>	2,222	1,916	1,037	5,068	519	10,762
2006 YTD	25,789	27,098	9,649	51,308	6,443	120,287
2005 YTD	17,024	21,878	15,718	55,537	5,886	116,043
2006 as % of 2005	151	124	61	92	109	104
Total 2005**	50,677	99,864	60,879	223,328	15,752	450,500
Total 2004	43,102	92,073	59,102	209,625	10,986	414,888

(\*) Incomplete Data; as of 9/22/04, Cross-Border movements included; (\*\*) Includes 53rd week; (\*\*\*) Mississippi Gulf data back to January, 2004 from several new sources has been added; (\*\*\*\*) **Cross-border Mexico data for 2004 and 2005 has been amended to reflect amendments submitted by our sources.** YTD= year-to-date; p=preliminary data; r = revised data

Railroads originate approximately 40 percent of U.S. grain shipments. Trends in these loadings are indicative of market conditions and expectations.

Figure 2

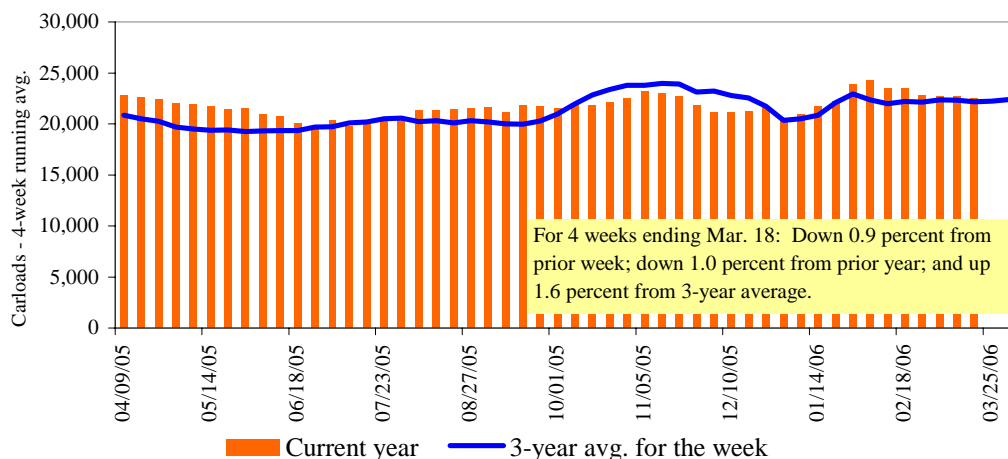
## Rail deliveries to port



Source: Transportation & Marketing Programs/AMS/USDA

Figure 3

## Total weekly U.S. grain car loadings for Class I railroads



Source: Association of American Railroads

**Table 4--Class I rail carrier grain car bulletin (grain carloads originated)**

Week ending	East		West			U.S. total	Canada	
	CSXT	NS	BNSF	KCS	UP		CN	CP
03/18/06	3,080	3,343	9,579	415	5,819	22,236	3,943	5,417
This week last year	3,405	3,628	8,873	685	6,649	23,240	4,583	2,855
2006 YTD	35,411	35,723	110,161	5,891	68,291	255,477	52,387	49,770
2005 YTD	34,610	37,919	106,936	7,546	65,655	252,666	50,057	43,379
Last 4 weeks as % of 2005	105.8	90.3	100.7	69.6	101.1	99.0	101.5	126.5
2006 as % of 2005	102.3	94.2	103.0	78.1	104.0	101.1	104.7	114.7
Total 2005	152,060	167,465	476,033	27,459	307,170	1,130,187	225,817	215,145

Source: Association of American Railroads (www.aar.org); YTD = year-to-date

**Table 5--Rail car auction offerings\*, week ending 03/25/06 (\$/car)\*\***

Delivery for:	May-06	Jun-06	Jul-06
BNSF <sup>1</sup>			
COT/N. grain	no bids	\$0	\$59
COT/S. grain	no bids	no bids	\$11
UP <sup>2</sup>			
GCAS/Region 1	no bids	no offer	no offer
GCAS/Region 2	no bids	no offer	no offer

\*Auction offerings are for single-car and unit train shipments only.

\*\*Average premium/discount to tariff, last auction

<sup>1</sup>BNSF - COT = Certificate of Transportation

N includes: ID, MN, MT, ND, OR, SD, WA, WI, WY, and Manitoba, Canada.

S includes: CO, IA, IL, KS, MO, NE, OK, TX, NM, AZ, CA, UT, and NV.

<sup>2</sup>UP - GCAS = Grain Car Allocation System

Region 1 includes: AR, IL, LA, MO, NM, OK, TX, WI, and Duluth, MN.

Region 2 includes: CO, IA, KS, MN, NE, WY, and Kansas City and St. Joseph, MO.

Source: Transportation & Marketing Programs/AMS/USDA

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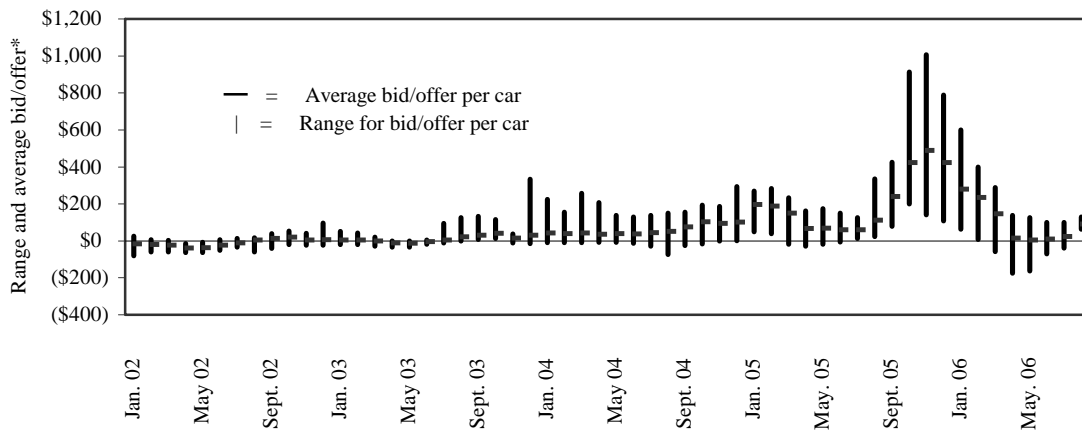
Rail service may be ordered directly from the railroad via **auction** for guaranteed service, or via tariff for nonguaranteed service, or through the secondary railcar market.

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The **secondary rail market** information reflects trade values for service that was originally purchased from the railroad carrier as some form of guaranteed freight. The **auction and secondary rail** values are indicators of rail service quality and demand/supply.

Figure 4

**Secondary rail car market, delivery month-year**



\*up to 6 months of trading

Source: Transportation & Marketing Programs/AMS/USDA

**Average bid/offer** is the simple average of all the weekly bids/offers over the entire period (up to 6 months) for guaranteed railcars that are traded for delivery in a particular month.

**Range for bid/offer** shows the range of average weekly bids/offers over the entire period (up to 6 months) for guaranteed railcars that are traded for delivery in a particular month.

**Table 6--Weekly secondary rail car market, week ending 03/25/06 (\$/car)\***

	Delivery period			
	May-06	Jun-06	Jul-06	Aug-06
BNSF-GF	-\$88	-\$8	\$38	\$85
Change from last week	-\$26	\$5	\$15	\$4
UP-Pool	-\$169	-\$46	\$28	\$129
Change from last week	-\$6	\$4	\$6	\$0

\*Average premium/discount to tariff, \$/car-last week

Note: Bids listed are market INDICATORS only & are NOT guaranteed prices,

Missing value = no bid quoted; GF = guaranteed freight; Pool = guaranteed pool

Sources: Transportation and Marketing Programs/AMS/USDA

Data from Atwood/ConAgra, Harvest States Co-op, James B. Joiner Co., Tradewest Brokerage Co.

**Table 7--Tariff rail rates for unit and shuttle train shipments\*****Effective date:**

	<b>Origin Region</b>	<b>Destination Region</b>	<b>Rate/car</b>	<b>Rate/metric ton</b>	<b>Rate/bushel**</b>
<b><u>Unit train*</u></b>					
Wheat	Chicago, IL	Albany, NY	\$1,861	\$20.51	\$0.56
	Kansas City, MO	Galveston, TX	\$2,020	\$22.27	\$0.61
	South Central, KS	Galveston, TX	\$2,450	\$27.01	\$0.74
	Minneapolis, MN	Houston, TX	\$2,420	\$26.68	\$0.73
	St. Louis, MO	Houston, TX	\$2,360	\$26.01	\$0.71
	South Central, ND	Houston, TX	\$4,149	\$45.73	\$1.24
	Minneapolis, MN	Portland, OR	\$3,963	\$43.68	\$1.19
	South Central, ND	Portland, OR	\$3,963	\$43.68	\$1.19
	Northwest, KS	Portland, OR	\$4,490	\$49.49	\$1.35
	Chicago, IL	Richmond, VA	\$2,161	\$23.82	\$0.65
Corn	Chicago, IL	Baton Rouge, LA	\$2,610	\$28.77	\$0.73
	Council Bluffs, IA	Baton Rouge, LA	\$2,470	\$27.23	\$0.69
	Kansas City, MO	Dalhart, TX	\$2,365	\$26.07	\$0.66
	Minneapolis, MN	Portland, OR	\$3,130	\$34.50	\$0.88
	Evansville, IN	Raleigh, NC	\$1,961	\$21.62	\$0.55
	Columbus, OH	Raleigh, NC	\$1,850	\$20.39	\$0.52
	Council Bluffs, IA	Stockton, CA	\$3,606	\$39.75	\$1.01
	Chicago, IL	Baton Rouge, LA	\$2,655	\$29.27	\$0.80
Soybeans	Council Bluffs, IA	Baton Rouge, LA	\$2,515	\$27.72	\$0.75
	Minneapolis, MN	Portland, OR	\$3,610	\$39.79	\$1.08
	Evansville, IN	Raleigh, NC	\$1,961	\$21.62	\$0.59
	Chicago, IL	Raleigh, NC	\$2,561	\$28.23	\$0.77
<b><u>Shuttle Train*</u></b>					
Wheat	St. Louis, MO	Houston, TX	\$1,820	\$20.06	\$0.55
	Minneapolis, MN	Portland, OR	\$3,763	\$41.48	\$1.13
Corn	Fremont, NE	Houston, TX	\$2,124	\$23.41	\$0.59
	Minneapolis, MN	Portland, OR	\$3,024	\$33.33	\$0.85
Soybeans	Council Bluffs, IA	Houston, TX	\$2,412	\$26.59	\$0.72
	Minneapolis, MN	Portland, OR	\$3,170	\$34.94	\$0.95

\*A unit train refers to shipments of at least 52 cars. Shuttle train rates are available for qualified shipments of more than 100 cars that meet railroad efficiency requirements.

\*\*Approximate load per car = 100 short tons: corn 56 lbs./bu., wheat & soybeans 60 lbs./bu.

Sources: [www.bnsf.com](http://www.bnsf.com), [www.cpr.ca](http://www.cpr.ca), [www.csx.com](http://www.csx.com), [www.uprr.com](http://www.uprr.com)

**Table 8--Tariff rail rates for U.S. bulk grain shipments to Mexico, 2005****Effective date:** 3/06/06

<b>Commodity</b>	<b>Origin State</b>	<b>Border crossing region</b>	<b>Train size</b>	<b>Rate<sup>1</sup></b>	<b>Rate/metric ton</b>	<b>Rate/bushel**</b>
Wheat	KS	Brownsville, TX	Shuttle	\$2,851	\$29.13	\$0.79
	ND	Eagle Pass, TX	Unit	\$4,086	\$41.75	\$1.14
	OK	El Paso, TX	Shuttle	\$2,235	\$22.84	\$0.62
	OK	El Paso, TX	Unit	\$2,432	\$24.85	\$0.68
	AR	Laredo, TX	Unit	\$2,383	\$24.35	\$0.66
	IL	Laredo, TX	Unit	\$3,188	\$32.57	\$0.89
	MT	Laredo, TX	Shuttle	\$3,980	\$40.67	\$1.11
	TX	Laredo, TX	Shuttle	\$2,165	\$22.12	\$0.60
	MO	Laredo, TX	Shuttle	\$2,731	\$27.90	\$0.76
	WI	Laredo, TX	Unit	\$3,405	\$34.79	\$0.95
Corn	NE	Brownsville, TX	Shuttle	\$3,543	\$36.20	\$0.92
	NE	Brownsville, TX	Unit	\$3623*	\$37.02	\$0.94
	IA	Eagle Pass, TX	Unit	\$3,773	\$38.55	\$0.98
	MO	Eagle Pass, TX	Shuttle	\$3364*	\$34.37	\$0.87
	NE	Eagle Pass, TX	Shuttle	\$3764*	\$38.46	\$0.98
	IA	Laredo, TX	Shuttle	\$3,696	\$37.76	\$0.96
Soybean	IA	Brownsville, TX	Shuttle	\$3,318	\$33.90	\$0.92
	MN	Brownsville, TX	Shuttle	\$3,614	\$36.93	\$1.00
	NE	Brownsville, TX	Shuttle	\$3,127	\$31.95	\$0.87
	NE	Eagle Pass, TX	Shuttle	\$3,203	\$32.73	\$0.89
	IA	Laredo, TX	Unit	\$3,357	\$34.30	\$0.93

A unit train refers to shipments of at least 52 cars. Shuttle train are available for qualified shipments of more than 100 cars that meet railroad efficiency requirements.

<sup>1</sup>Rates are based upon published tariff rates for high-capacity rail cars.

\*High-capacity rate not available, rate estimated using published low-capacity tariff rate x 1.08

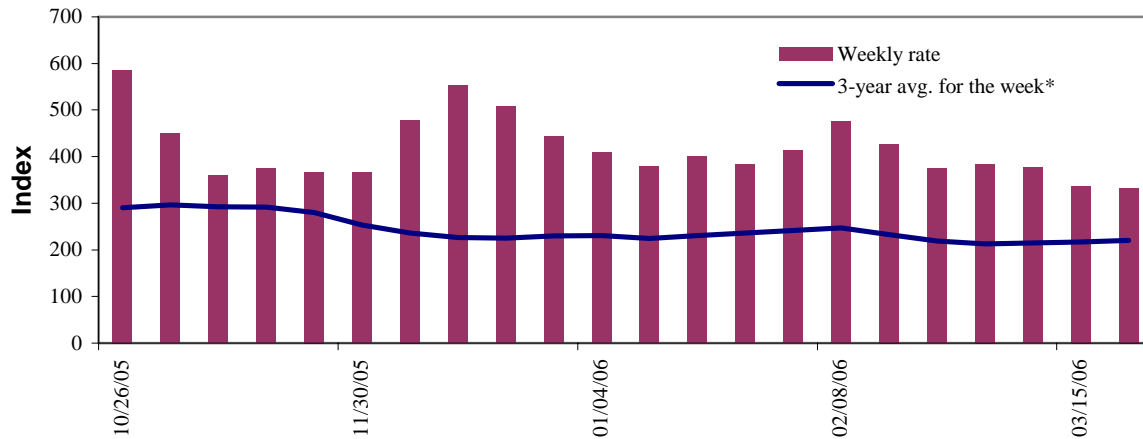
\*\*Approximate load per car = 97.87 metric tons: Corn 56 lbs/bu, Wheat & Soybeans 60 lbs/bu

Sources: www.bnsf.com, www.uprr.com

# Barge Transportation

Figure 5

## Illinois River barge rate index - quotes



Note: Index = percent of tariff rate; \*4-week moving average

Source: Transportation & Marketing Programs/AMS/USDA

The **Illinois River barge rate index** averaged 183 percent of the **benchmark tariff rates** between 1999 and 2001, based on weekly market quotes. The **index**, along with **rate quotes** and **futures market bids** are indicators of grain transport supply and demand.

**Table 9--Barge rate quotes: southbound barge freight**

Location	3/22/2006	3/15/2006	April '06	June '06
Twin Cities	n/a	n/a	385	381
Mid-Mississippi	358	375	343	343
Illinois River	333	337	328	339
St. Louis	301	307	283	297
Lower Ohio	296	313	280	296
Cairo-Memphis	242	271	241	266

Index = percent of tariff, based on 1976 tariff benchmark rate

Source: Transportation & Marketing Programs/AMS/USDA

### Calculating barge rate per ton:

$(\text{Index} * 1976 \text{ tariff benchmark rate per ton}) / 100$

Select applicable index from market quotes included in tables on this page. The 1976 benchmark rates per ton are provided in map (see figure 6).

**Note:** The Illinois barge rate is for Beardstown, IL, La Grange Lock & Dam (L&D 8).

Figure 6

## Benchmark tariff rates

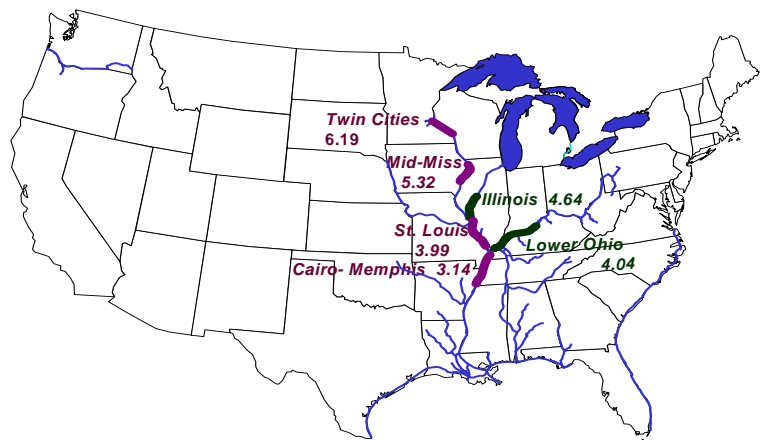
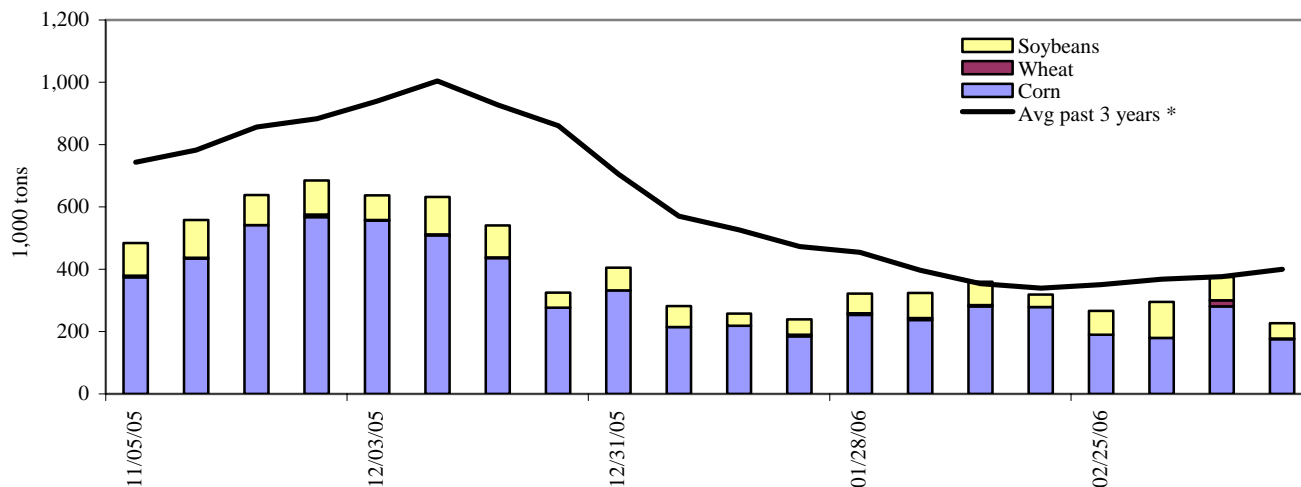




Figure 7

**Barge movements on the Mississippi River (Locks 27 - Granite City, IL)**

\* 4-week moving average

Source: Transportation &amp; Marketing Programs/AMS/USDA

**Table 10--Barge grain movements (1,000 tons)**

Week ending 3/18/2006	Corn	Wheat	Soybean	Other	Total
<b>Mississippi River</b>					
Rock Island, IL (L15)	21	0	5	0	26
Winfield, MO (L25)	28	2	9	0	38
Alton, IL (L26)	172	2	58	0	231
Granite City, IL (L27)	175	2	50	0	227
<b>Illinois River (L8)</b>	104	0	29	2	135
<b>Ohio River (L52)</b>	138	0	43	0	181
<b>Arkansas River (L1)</b>	1	27	23	1	52
2006 YTD	4,206	275	1,638	214	6,333
2005 YTD	3,728	327	2,017	184	6,256
2006 as % of 2005 YTD	113	84	81	116	101
Total 2005	23,761	1,620	7,276	731	33,388

YTD (year-to-date) and calendar year total includes Miss/27, Ohio/52, and Ark/1; "Other" refers to oats, barley, sorghum, and rye.

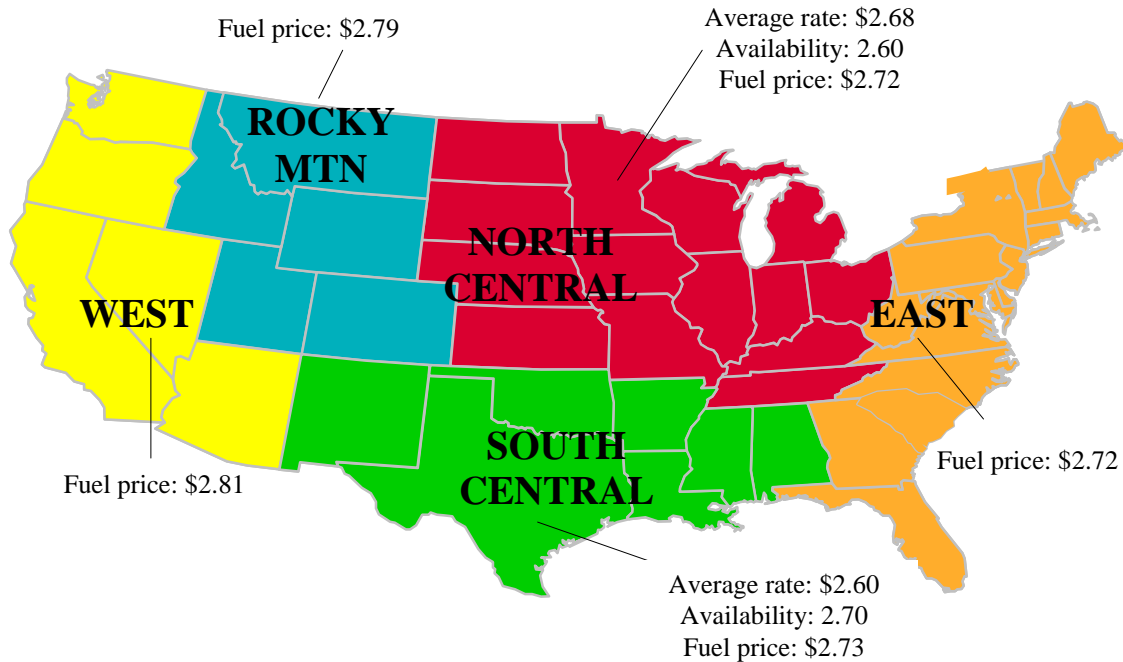
Source: U.S. Army Corp of Engineers ([www.mvr.usace.army.mil/mvrimi/omni/webrrpts/default.asp](http://www.mvr.usace.army.mil/mvrimi/omni/webrrpts/default.asp))

Note: Total may not add exactly, due to rounding

# Truck Transportation

Figure 8

U.S. grain truck market advisory, 4<sup>th</sup> quarter 2005\*



\*Average rate per loaded mile, based on truck rates for trips of 25, 100, and 200 miles

Note: Fuel prices are a quarterly average (unit per gallon)

Fuel price data source: Energy Information Administration, U.S. Department of Energy, [www.eia.doe.gov](http://www.eia.doe.gov)

Table 11--U.S. grain truck market overview, 4<sup>th</sup> quarter 2005

Region	25 miles	100 miles	200 miles	Truck availability	Truck activity	Future truck activity
	<sup>1</sup> Rate per mile			Rating compared to same quarter last year		
				1=Very easy to 5=Very difficult	1=Much lower to 5=Much higher	
<b>National average<sup>2</sup></b>	<b>3.31</b>	<b>2.46</b>	<b>2.26</b>	<b>2.6</b>	<b>2.9</b>	<b>2.9</b>
North Central region	3.23	2.51	2.29	2.6	3.0	3.0
Rocky Mountain	4.58	2.35	1.95	2.8	3.0	3.0
South Central	3.00	2.42	2.39	2.7	2.5	2.7
West	n/a	n/a	n/a	2.0	3.5	3.0

<sup>1</sup>Rates are based on trucks with 80,000 lb gross vehicle weight limit

<sup>2</sup>National average includes: AL, AR, CO, IA, ID, IL, IN, KS, LA, MN, MO, MS, MT, ND, NE, OH, OK, OR, SD, TX, WA, WI, and WY.

Source: Transportation and Marketing Programs/AMS/USDA

The **weekly diesel price** provides a proxy for trends in U.S. truck rates. Diesel fuel is a significant expense for truck grain movements, accounting for 37 percent of the estimated variable cost.

**Table 12--Retail on-highway diesel prices\*, week ending 3/27/06 (US\$/gallon)**

Region	Location	Price	Change from	
			Week ago	Year ago
I	East Coast	2.586	-0.020	0.338
	New England	2.700	-0.002	0.326
	Central Atlantic	2.681	-0.016	0.321
	Lower Atlantic	2.536	-0.022	0.347
II	Midwest <sup>1</sup>	2.523	-0.010	0.320
III	Gulf Coast <sup>2</sup>	2.528	-0.024	0.346
IV	Rocky Mountain	2.601	-0.007	0.275
V	West Coast	2.698	-0.018	0.215
	California	2.727	-0.011	0.215
Total	U.S.	2.565	-0.016	0.316

\*Diesel fuel prices include all taxes.

Source: Energy Information Administration/U.S. Department of Energy ([www.eia.doe.gov](http://www.eia.doe.gov))

<sup>1</sup>Same as North Central

<sup>2</sup>Same as South Central

# Grain Exports

**Table 13--U.S. export balances (1,000 metric tons)**

Week ending 1/	Wheat						Corn	Soybeans	Total
	HRW	SRW	HRS	SWW	DUR	All wheat			
3/16/2006	1,169	288	1,094	737	224	3,512	9,141	2,368	15,021
This week year ago	1,576	241	1,343	499	110	3,769	7,291	3,046	14,106
Cumulative exports-crop year 2/									
2005/06 YTD	8,949	1,677	6,143	3,425	607	20,802	26,426	18,353	65,581
2004/05 YTD	7,728	2,946	6,366	4,106	556	21,702	24,894	23,694	70,290
2005/06 as % of 2004/05	116	57	96	83	109	96	106	77	93
2004/05 Total	9,407	3,217	8,083	4,773	686	26,117	44,953	29,878	100,948
2003/04 Total	12,697	3,785	6,928	4,895	1,053	29,359	47,704	24,108	101,171

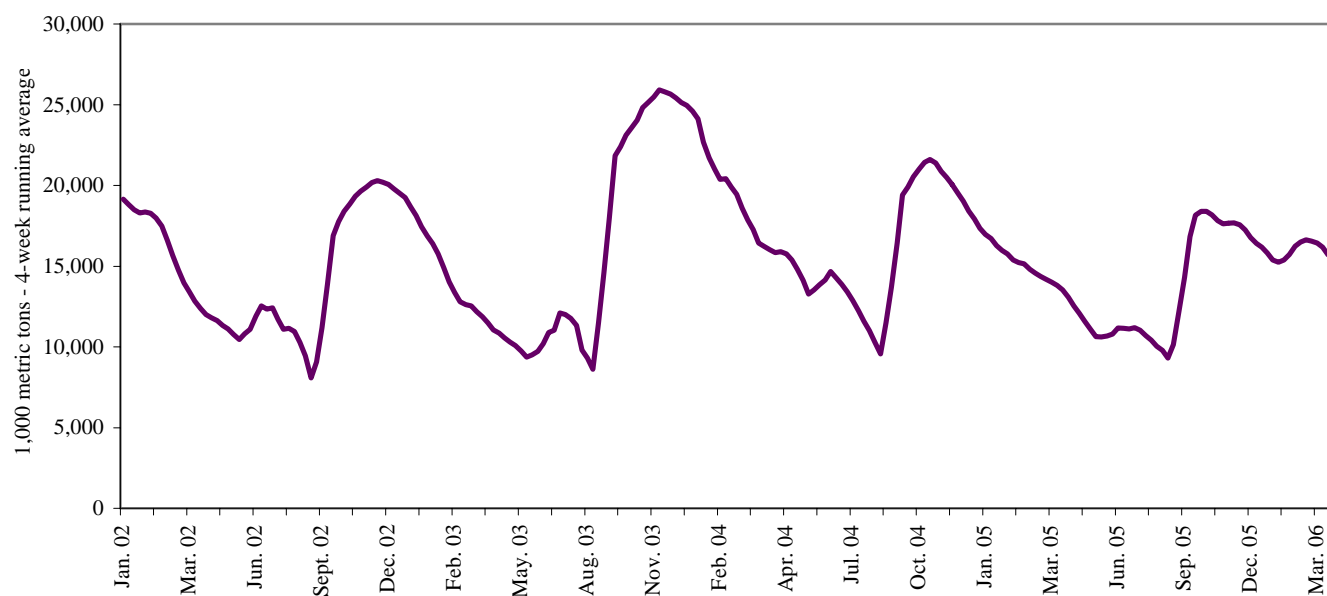
Note: YTD = year-to-date. Crop year: wheat = 6/01-5/31, corn & soybeans = 9/01-8/31, 1/ = Current unshipped export sales to date

2/ = Shipped export sales to date

Source: Foreign Agricultural Service/USDA ([www.fas.usda.gov](http://www.fas.usda.gov))

Figure 9

**U.S. grain, unshipped export balance, including wheat, corn, and soybean sales**



Source: Foreign Agricultural Service/USDA ([www.fas.usda.gov](http://www.fas.usda.gov))

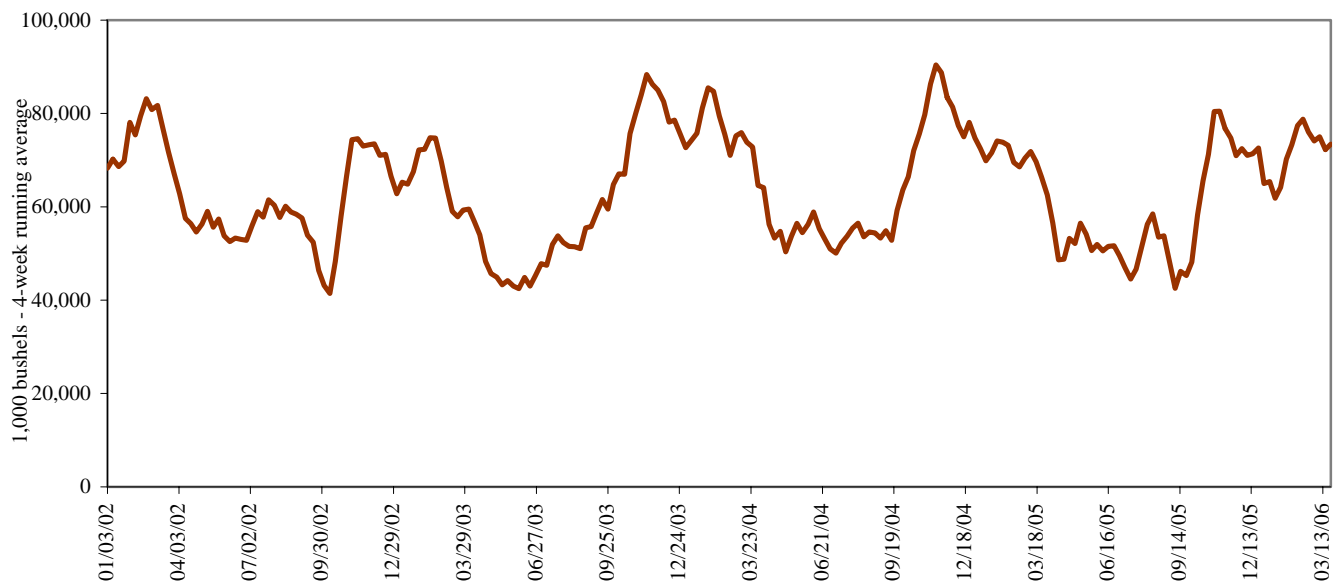
**Table 14--Select U.S. port regions - grain inspections for export (1,000 metric tons)**

Week ending	Pacific Region			Mississippi Gulf			Texas Gulf			Port Region total		
	Wheat	Corn	Soybeans	Wheat	Corn	Soybeans	Wheat	Corn	Soybeans	Pacific	Mississippi	Texas
03/23/06	263	215	170	47	525	397	94	76	0	647	968	171
2006 YTD	2,719	1,969	1,748	1,081	8,113	5,179	1,910	429	15	6,436	14,373	2,353
2005 YTD	2,636	2,035	2,041	1,346	6,333	6,045	1,501	209	6	6,712	13,724	1,716
2006 as % of 2005	103	97	86	80	128	86	127	205	260	96	105	137
2005 Total *	10,801	10,104	6,225	4,643	27,596	14,793	7,743	810	36	27,130	47,032	8,589

Source: Grain Inspection, Packers and Stockyards Administration/USDA ([www.gipsa.usda.gov](http://www.gipsa.usda.gov)); YTD: year-to-date; \*includes weekly revisions

The United States exports approximately one-quarter of the grain it produces. On average, it includes nearly 45 percent of U.S.-grown wheat, 35 percent of U.S.-grown soybeans, and 20 percent of the U.S.-grown corn. Approximately 55 percent of these U.S. export grain shipments departed through the Mississippi Gulf region in 2004.

Figure 10

**U.S. grain inspected for export (wheat, corn, and soybeans)**

Source: Grain Inspection, Packers and Stockyards Administration/USDA ([www.gipsa.usda.gov](http://www.gipsa.usda.gov))

# Ocean Transportation

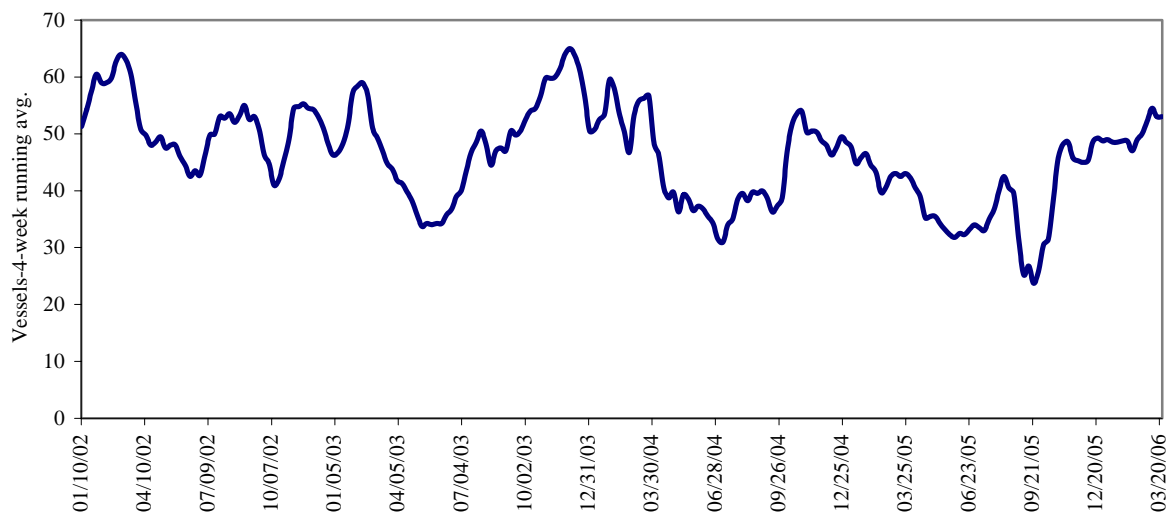
**Table 15--Weekly port region grain ocean vessel activity (number of vessels)**

Date	Gulf			Pacific Northwest	Vancouver B.C.
	In port	Loaded 7-days	Due next 10-days	In port	In port
3/23/2006	18	47	52	7	6
3/16/2006	25	50	61	12	6
2005 range	(11..57)	(10..56)	(18..76)	(2..16)	(0..17)
2005 avg.	27	39	53	9	7

Source: Transportation & Marketing Programs/AMS/USDA

Figure 11

**Gulf Port grain vessel loading (past 7 days)**



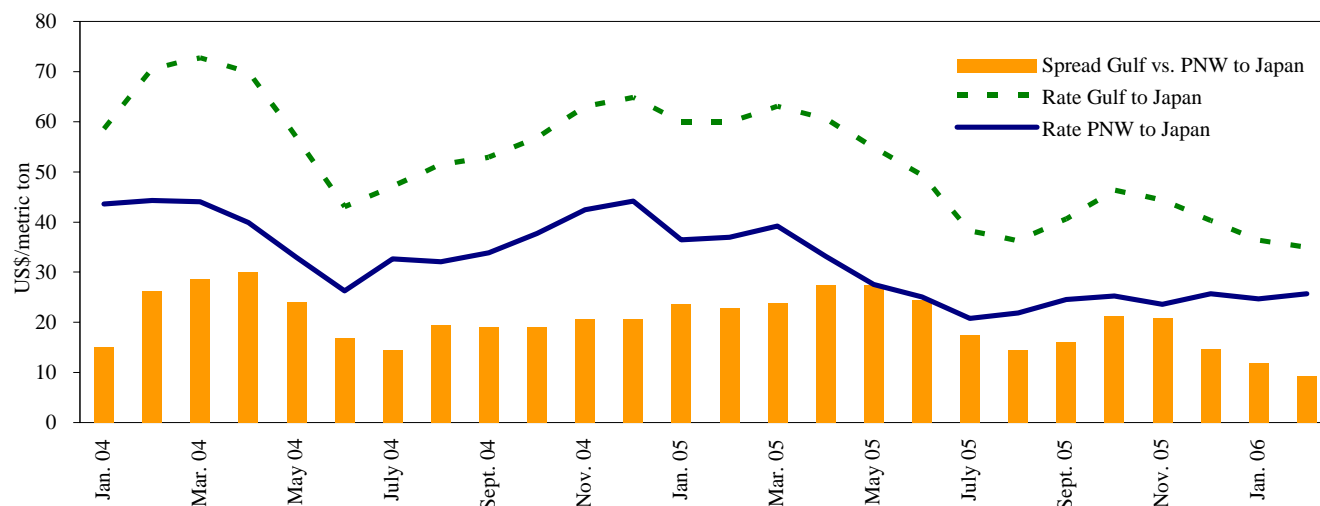
Source: Transportation & Marketing Programs/AMS/USDA

**Table 16--Quarterly ocean freight rates (average rates & percentage changes) (US\$/metric ton)**

Countries/ regions	2005 4 <sup>th</sup> qtr	2004 4 <sup>th</sup> qtr	Percent change	Countries/ regions	2005 4 <sup>th</sup> qtr	2004 4 <sup>th</sup> qtr	Percent change
<b>Gulf to</b>				<b>Pacific NW to</b>			
Japan	46.75	60.83	-23	Japan	---	---	---
China		56.35	---	<b>Argentina/Brazil to</b>			
N. Africa	31.75	---	---	N. Africa	42.67	---	---
Med. Sea	31.75	---	---	Mediterranean	40.20	---	---

Source: Maritime Research, Inc. (www.maritime-research.com)

Figure 12

**Grain vessel rates, U.S. to Japan**

Source: Baltic Exchange (www.balticexchange.com)

**Table 17--Ocean freight rates for selected shipments, week ending 3/25/06**

Export region	Import region	Grain	Month	Volume loads (metric tons)	Freight rate (\$/metric ton)
U.S. Gulf	China	Hvy Grain	Feb 20/28	55,000	31.00
U.S. Gulf	N. China	Hvy Grain	Feb 20/28	55,000	29.75
United Kingdom	Thailand	Wheat	Feb 25/Mar 10	42,000	21.50
PNW	Pakistan*	Soybeans	Feb 16/27	10,000	59.45
Brazil	N. China	Hvy Grain	Feb 10/18	58,000	27.50
Brazil	N. France	Grains	Mar 12/20	25,000	26.00
River Plate	Poland	Grains	Feb 21/26	30,000	36.00

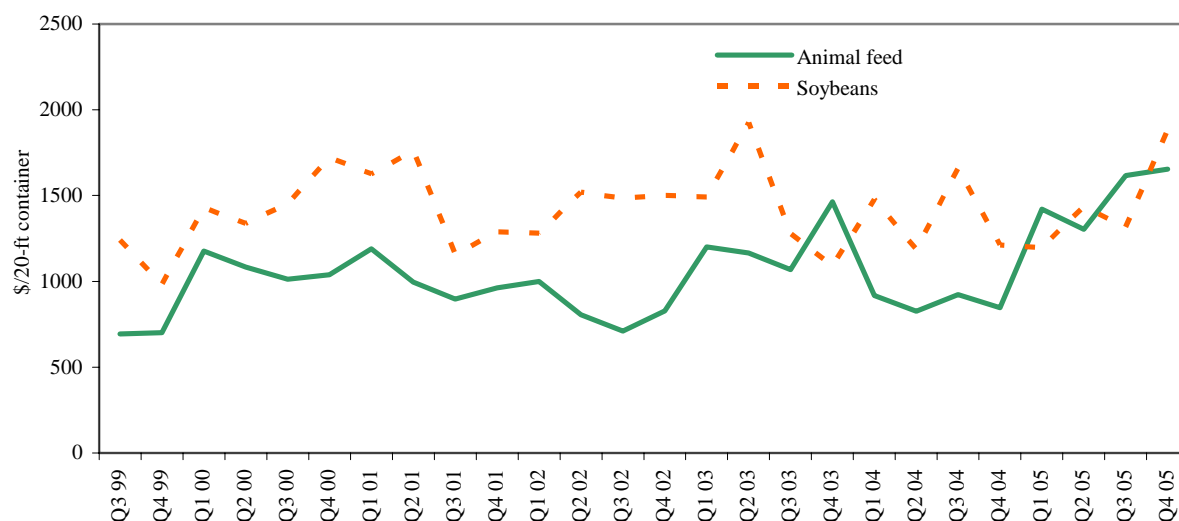
Rates shown are for metric ton (2,204.62 lbs. = 1 metric ton), F.O.B., except where otherwise indicates; op = option

\*75 percent of food aid from the United States is required to be shipped on U.S. flag vessels. The vessels are limited in availability resulting in higher rates. In addition, destinations receiving food aid generally lack adequate port unloading facilities, requiring the vessel to remain in port for a longer duration than normal.

Source: Maritime Research Inc. (www.maritime-research.com)

Figure 13

**Weighted average rates<sup>1</sup> for containerized shipments of animal feed and soybeans to selected Asian countries**



<sup>1</sup> Animal Feed: Busan-Korea (12%), Kaohsiung-Taiwan (34%), Tokyo-Japan (35%), Hong Kong (13%), Bangkok-Thailand (6%) and soybeans: Busan-Korea (1%), Keelung-Taiwan (89%), Tokyo-Japan (8%), Bangkok-Thailand (1%), Hong Kong (1%)

Quarter 4, 2005.

Source: Ocean Rate Bulletin, Transportation & Marketing Programs/AMS/USDA

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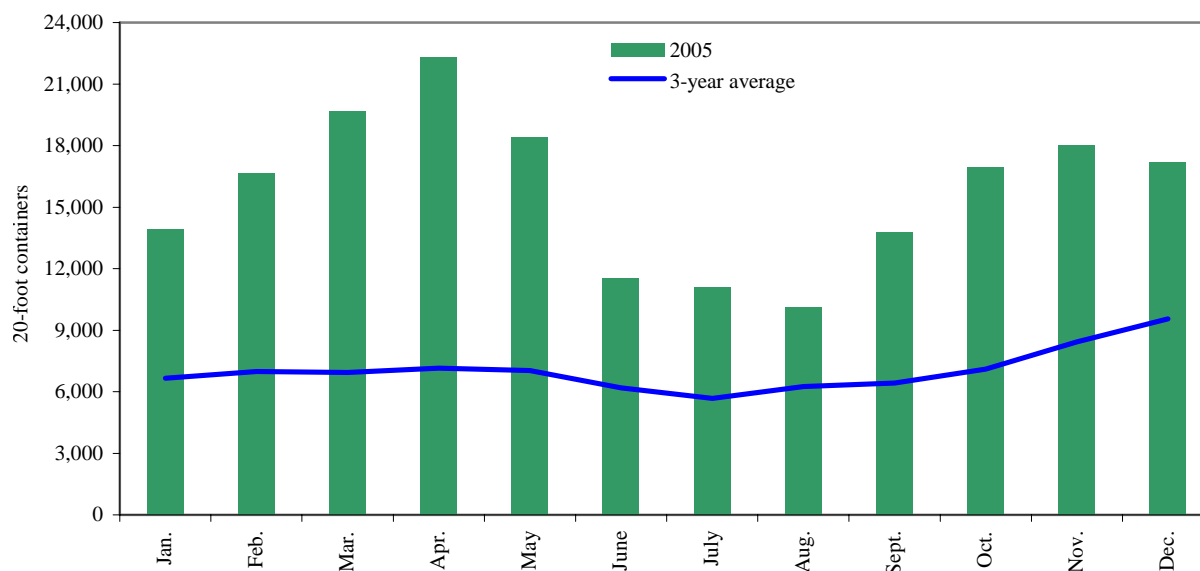
Container ocean freight rates – average rate per twenty-foot equivalent unit (TEU) weighted by shipping line market share and trade route.

During 2004, containers were used to transport 2 percent of total U.S. grain exported, and 3 percent of total U.S. grain exported to Asia.

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Figure 14

**Monthly shipments of containerized grain to Asia for 2005 compared with a 3-year average**



Source: Port Import Export Reporting Service (PIERS), *Journal of Commerce*

Note: PIERS data is available with a lag of approximately 40 days



# Brazil Transportation

Figure 15  
Routes and Regions considered in the Brazilian soybean export transportation indicator<sup>1</sup>



<sup>1</sup>Regions comprised 84 percent of Brazilian soybean production, 2003  
Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS

**Table 18--Truck rates for selected Brazilian soybean export transportation routes, 4th quarter 2005**

Route #	Origin <sup>1</sup> (reference city)	Destination	Distance (miles) <sup>2</sup>	Weight(%) <sup>3</sup>	Freight price (per 100 miles) <sup>4</sup>
1	Northwest RS <sup>5</sup> (Cruz Alta)	Rio Grande	288	16.6	4.58
2	North MT(Sorriso)	Santos	1190	10.1	6.94
3	North MT(Sorriso)	Paranaguá	1262	9.5	6.41
4	South GO(Rio Verde)	Santos	587	7.0	7.25
5	South GO(Rio Verde)	Paranaguá	726	5.6	5.74
6	North Center PR(Londrina)	Paranaguá	268	4.4	7.93
7	Western Center PR(Mamborê)	Paranaguá	311	3.9	6.41
8	Triangle MG(Uberaba)	Santos	339	3.8	9.98
9	West PR(Assis Chateaubriand)	Paranaguá	377	3.7	6.34
10	West Extreme BA(São Desidério)	Ilhéus	544	3.6	7.87
11	Southeast MT(Primavera do Leste)	Santos	901	3.6	6.97
12	Southeast MT(Primavera do Leste)	Paranaguá	975	3.3	6.22
13	Southwest MS(Maracaju)	Paranaguá	612	3.1	5.79
14	Southwest MS(Maracaju)	Santos	652	2.9	6.24
15	West PR(Assis Chateaubriand)	Santos	550	2.5	5.85
16	Western Center RS(Tupanciretã)	Rio Grande	273	2.4	5.74
17	Southwest PR(Chopinzinho)	Paranaguá	291	2.3	9.17
18	Eastern Center PR(Castro)	Paranaguá	130	2.3	9.96
19	South Center PR(Guarapuava)	Paranaguá	204	2.1	8.67
20	North Center MS(São Gabriel do Oeste)	Santos	720	2.0	5.62
21	Ribeirão Preto SP(Guairá)	Santos	314	1.5	8.27
22	Northeast MT(Canarana)	Santos	950	1.4	7.87
23	Assis SP(Palmital)	Santos	285	1.2	7.85
24	Northeast MT(Canarana)	Paranaguá	1075	1.2	6.96
<b>Average</b>			<b>626</b>	<b>100</b>	<b>6.64</b>

<sup>1</sup>Although each origin region comprises several cities, the main city is considered as a reference to establish the freight price

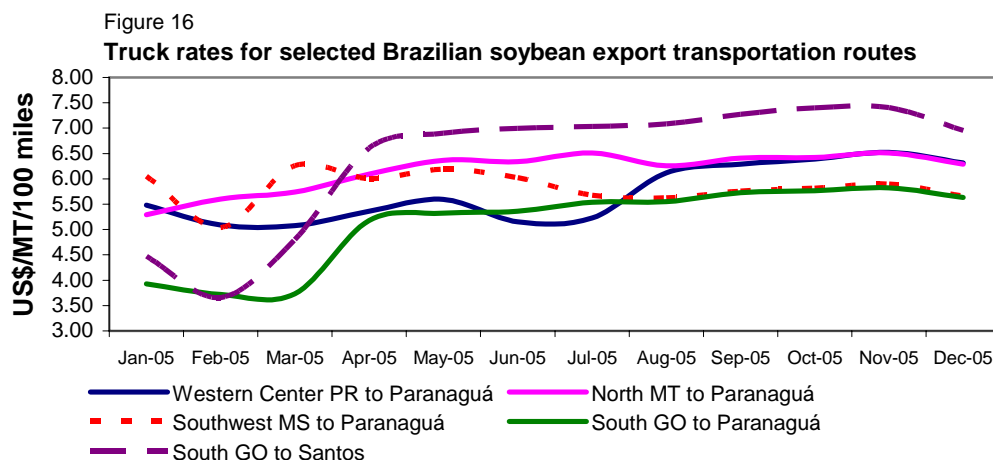
<sup>2</sup>Distance from the main city of the considered region to the mentioned ports

<sup>3</sup>The weight is directly proportional to the amount of production in each region

<sup>4</sup>US\$ per metric ton (average monthly exchange rate from "Banco Central do Brasil" was used to convert Brazilian reais to the U.S. dollar)

<sup>5</sup>RS = Rio Grande Do Sul, MT= Mato Grosso, GO = Goiás, PR = Paraná, MG = Minas Gerais, BA = Bahia, MS = Mato Grosso Do Sul, SP = São Paulo

Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS



Source: ESALQ/ USP (University of São Paulo, Brazil) and USDA/AMS

**Table 19--Monthly Brazilian soybean export truck transportation cost index**

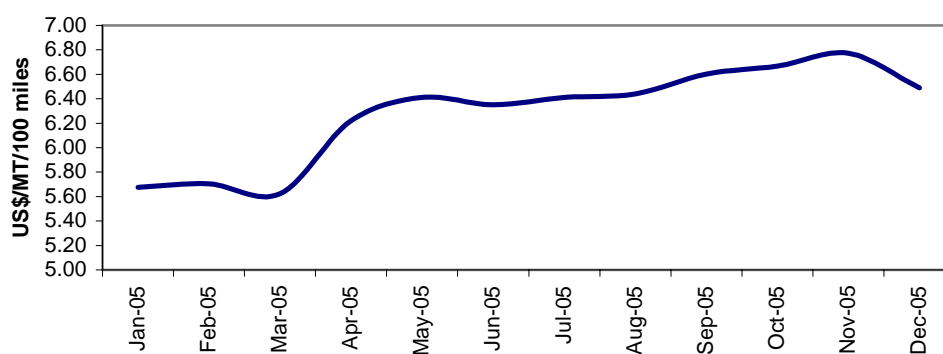
Month	Freight price* (per 100 miles)	Index variation (%) (Base: prior month)	Index value (Base: Jan. 05 = 100)
Jan. 05	5.67		100.00
Feb. 05	5.71	0.5	100.54
Mar. 05	5.62	-1.5	99.08
Apr. 05	6.22	10.6	109.61
May 05	6.41	3.1	112.96
Jun. 05	6.35	-0.9	111.90
Jul. 05	6.41	1.0	112.99
Aug. 05	6.44	0.4	113.46
Sep. 05	6.60	2.5	116.36
Oct. 05	6.67	1.0	117.52
Nov. 05	6.77	1.5	119.33
Dec. 05	6.49	-4.2	114.34

\*weighted average and quoted in US\$ per metric ton

Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS

Figure 17

**Brazilian soybean export truck transportation weighted average prices, 2005**



Source: ESALQ/USP (University of São Paulo, Brazil) and USDA/AMS

**Table 20--Quarterly ocean freight rates for shipping soybeans from selected Brazilian ports to Hamburg, Germany (US\$/metric ton)\***

Ports	2005 1st qtr	2005 2nd qtr	2005 3rd qtr	2005 4th qtr
Santos	45.53	45.84	44.54	56.73
Paranagua	44.64	44.84**	43.54	55.73
Rio Grande	44.20	44.39	43.04	55.23

\*correspond to the average actual values negotiated between shippers and carriers and weighted according to the magnitude of the shipped volumes

Source: Sistema de Informações de Fretes, SIFRECA, ESALQ/USP (University of São Paulo, Brazil)

\*\*Revised figure

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## Related Websites

*Agricultural Container Indicators*  
*Ocean Rate Bulletin*

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